APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/339,222	06/24/1999	TAKFUMI NOGUCHI	1982-0135P	2334

7590   12/16/2002

BIRCH STEWART KOLASCH & BIRCH
P O BOX 747
FALLS CHURCH, VA   22040-0747

EXAMINER
VIDA, MELANIE M

ART UNIT	PAPER NUMBER
2697	

DATE MAILED: 12/16/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

	Application No.	Applicant(s)
Office Action Summary	09/339,222	NOGUCHI ET AL.
	Examiner	Art Unit
	Melanie M Vida	2697

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _24 June 1999_ .

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☐ Claim(s) _____ is/are pending in the application.

  4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-5_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _24 June 1999_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

  If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

  a)☒ All b)☐ Some * c)☐ None of:

    1. ☒ Certified copies of the priority documents have been received.

    2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

    3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

  * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

  a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1.   **Claims 1, 4, and 5** are rejected under 35 U.S.C. 102(b) as being unpatentable by

Fuchsberger, U.S. Patent 4,825,297. Regarding, **claim 1,** Fuchsberger teaches a first conversion

means where the RGB image signals, read as the digital code values of each pixel of image data,

are converted to linear transparency image signals through antilogarithms of the image signals

(Figure 2, elements 10-13), and (column 4, line 50-54). Additionally, the pixels in RGB space

are converted to YUV color space, which has a linear relationship in light intensity values to be

corrected, (column 4, lines 57-68), (Figure 2, element 13). Any of the steps comprising elements

10-13 in Figure 2 may be read as the first conversion means. Fuchsberger also teaches that the

YUV image data is next fed to both a color saturation regulator and a contrast enhancement

circuit, read as the second conversion where image data converted from the first conversion

means undergoes at least one of color or density correction (Figure 2, module 14, 15), (column 5,

lines 5-8). Finally, Fuchsberger discloses a third conversion means in Figure 2, element 16,

whereby the values of the pixel in YUV, from the second conversion means are restored back to

the original coordinate system, RGB, (column 5, line 8-11), and (Figure 2, element 16).

Regarding, **claim 4,** please refer to the like teachings of claim 1. Regarding, **claim 5**, please refer

to the like teachings of claim 1 and elements 13-16, of Figure 2 comprise the device for carrying

out the first through third conversions (column 4, line 57 through column 5, line 14). Regarding,

claim 5, please refer to the like teachings of claim 1, and the recording means or ROM for the

first conversion means is stored in the color matrix, Figure 2, element 10 (column 4, line 43-46).

Further, the actual image processing can be controlled by an input element 5 in Figure 1,

(column 4, line 8-11). Fuchsberger inherently teaches that there is a recording medium for the

second conversion means in the elements 14, and 15, of Figure 2. Finally, the recording medium

for the third conversion means is in the memory of element 16, in Figure 2.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fuchsberger as

applied to claim1 above, and further in view of Stokes, et al.

http://www.w3.org/Graphics/Color/sRGB.html. Fuchsberger teaches the first, second, and third

conversion means in claim 1, but fails to teach the specific equations of the first or third

conversion means. Stokes teaches the equivalent equations for the first or third conversion

means, (page 11 of 17, equations 1.2a, 1.2b). Stokes illustrates equations 1.2a, read as the

equivalent first set of three equations for **A, B, and C** in the claim. The second set of three

equations for **A, B, C**, in claim 2 is being read as the equivalent set given by Stokes in 1.2b for

R'_{sRGB}, G'_{sRGB}, B'_{sRGB}, respectively. With regards to equation 1.2a and 1.2b, **A, B, C**, are read as

Stoke's, R'_{sRGB}, G'_{sRGB}, B'_{sRGB}, respectively. Similarly, **A', B', C'** are read as Stoke's, R_{sRGB},

G_{sRGB}, B_{sRGB}, respectively Further, the constant, **e**, in the claim is read to be equal to the

constant, one, in Stoke's disclosure. Next, the constant, **a,** is read as the constant, 12.92, in

equation 1.2a or any constant that is fine-tuned according to the image processing application.

With regards to equation 1.2b and the second set of three equations in the claim, the exponent

constant, **c,** is read as any constant including the one illustrated by Stokes. Further, equation 1.2a,

places an upper bound on $\mathbf{R_{sRGB}}$, $\mathbf{G_{sRGB}}$, $\mathbf{B_{sRGB}}$, whereby through mathematical translation of

these bounds Stokes inherently defines an upper bound on $\mathbf{R'_{sRGB}}$, $\mathbf{G'_{sRGB}}$, $\mathbf{B'_{sRGB}}$. This inherent

upper bound on $\mathbf{R'_{sRGB}}$, $\mathbf{G'_{sRGB}}$, $\mathbf{B'_{sRGB}}$ is being read as an upper limit or a predetermined upper

value, **f,** per the claim. Similarly, Stoke teaches that there is lower bound given for $\mathbf{R_{sRGB}}$, $\mathbf{G_{sRGB}}$,

$\mathbf{B_{sRGB}}$, whereby Stokes inherently defines a lower bound through mathematical translation of the

bound given for this equation for $\mathbf{R'_{sRGB}}$, $\mathbf{G'_{sRGB}}$, $\mathbf{B'_{sRGB}}$. The inherent lower bound on $\mathbf{R'_{sRGB}}$,

$\mathbf{G'_{sRGB}}$, $\mathbf{B'_{sRGB}}$ is being read as a lower limit or a predetermined lower limit, **f,** per the claim. The

constant, **d,** in the claim is being read as any numerical, offset or constant value to the color

pixels, such as that given by Stokes, 0.055 in equation 1.2B. One of ordinary skill in the art

would have been motivated to combine Stoke's equations, 1.2a and 1.2b with the first and third

conversion means described in the specification and the claims because Stoke's method is an

open-international standard, which can be freely modified, or used by anyone in the field of

image processing. Further, Stoke's equations allow for invertability in integer math, whereby the

first conversion equations could be inverted in order to acquire the results of the third conversion

means as described in the specification.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fuchsberger, et. al

as applied to claim 1 above, and further in view of Stokes, et al.

http://www.w3.org/Graphics/Color/sRGB.html. Fuchsberger discloses all the elements of claim 1

except a means to perform an affine transformation. According to the definition in the specification, Stokes performs an affine transformation in equation 1.2b, page 11 of 17, where the constant value 0.055 is a negative offset and the constant value 1.055 is the gain.

Conclusion

3.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

     Usami, US Patent 5,608,549 apparatus and method for color image processing.

     Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie M Vida whose telephone number is (703) 306-4220. The examiner can normally be reached on 8:30 am 5:30 pm.

     If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached on 305-4717. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-6743 for regular communications and (703) 308-6743 for After Final communications.

     Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

MMV

MMV
December 4, 2002

KAWilliams

Kimberly A. Williams
Primary Examiner
Technology Center 2700

Attachment for PTO-948 (Rev. 03/01, or earlier)
6/18/01

The below text replaces the pre-printed text under the heading, "Information on How to Effect Drawing Changes," on the back of the PTO-948 (Rev. 03/01, or earlier) form.

INFORMATION ON HOW TO EFFECT DRAWING CHANGES

1. Correction of Informalities -- 37 CFR 1.85

New corrected drawings must be filed with the changes incorporated therein Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application If this information is provided, it must be placed on the front of each sheet and centered within the top margin. If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings **MUST** be filed within the **THREE MONTH** shortened statutory period set for reply in the Notice of Allowability. Extensions of time may NOT be obtained under the provisions of 37 CFR 1.136(a) or (b) for filing the corrected drawings after the mailing of a Notice of Allowability The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson

2. Corrections other than Informalities Noted by Draftsperson on form PTO-948.

All changes to the drawings, other than informalities noted by the Draftsperson, MUST be made in the same manner as above except that, normally, a highlighted (preferably red ink) sketch of the changes to be incorporated into the new drawings MUST be approved by the examiner before the application will be allowed No changes will be permitted to be made, other than correction of informalities, unless the examiner has approved the proposed changes

Timing of Corrections

Applicant is required to submit the drawing corrections <u>within the time period set in the attached Office communication</u>. See 37 CFR 1.85(a).

Failure to take corrective action within the set period will result in ABANDONMENT of the application